

Customer No.: 31561  
Application No.: 10/064,238  
Docket No.: 8868-US-PA

### REMARKS

#### Claim Rejections – 35 U.S.C. § 102

Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Farhang-Boroujeny et al. U.S. Pat 6,853,626.

In response to the rejection to claims 1-16 under 35 U.S.C. 102(e) as being anticipated by Farhang-Boroujeny et al. U.S. Pat 6,853,626, Applicants hereby otherwise traverse this rejection. As such, Applicant submits that claims 1-16 are novel and unobvious over Farhang-Boroujeny '626, and any of the other cited references, taken alone or in combination.

Claim 1, as originally filed, recites in part:

A method for hardware reduction in an echo canceller, comprising:  
applying an N (N is a positive integer) times divide frequency sampling operation onto **an input data list of the echo canceller** ... (Emphasis added)

Applicants submit that such a method as set forth in claim 1 is neither taught, disclosed, nor suggested by Farhang-Boroujeny '626, and any of the other cited references, taken alone or in combination.

Farhang-Boroujeny '626 fails to disclose, teach or suggest a step of the present method, that is "applying an N (N is a positive integer) times divide frequency sampling operation onto **an input data list of the echo canceller**" as set forth in claim 1 (Emphasis added).

Applicants acknowledge that Farhang-Boroujeny '626 teaches a decimator 238 that is alleged by the Examiner performing the step of "applying an N (N is a positive integer) times divide frequency sampling operation onto **an input data list of the echo canceller**" as set

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forth in claim 1. However, as shown in FIG. 2 of Farhang-Boroujeny '626, such a decimator 238 is not coupled before the echo canceller, part of EC filter 234 alleged by the Examiner, thus as indicated by the arrows showing the signal transmitting directions, an input data list of the echo canceller of Farhang-Boroujeny '626 is J times upsampled by the UPSAMPLE item 232. Comparing FIG. 2 of Farhang-Boroujeny '626 with FIG. 3 that illustrates the present invention, it would become more apparent what the difference between Farhang-Boroujeny '626 and the present invention is. As shown in FIG. 3 of the present invention, the divide frequency sampling operation, as set forth in claim 1 is applied to the input signals, marked as  $X_0, X_1, X_2, X_3, \dots, X_N$ . On the contrary, Farhang-Boroujeny '626, as taught by FIG. 2, a J times upsampling operation (232) is applied to the input signals of the echo canceller (234).

For failing to teach every element of claim 1, Farhang-Boroujeny '626 does not anticipate the present invention, as set forth in claim 1 at all. As such, the present invention as set forth in claim 1 is submitted to be novel and unobvious over Farhang-Boroujeny '626, or any of the other cited references, taken alone or in combination, and thus should be allowed. MPEP §2131

Likewise, claim 9, as originally filed, recites in part:

A method for hardware reduction in a near-end crosstalk canceller, comprising:  
applying an N (N is a positive integer) times divide frequency sampling operation onto an input data list of the near-end crosstalk canceller ... (Emphasis added)

For the reasons discussed above addressing to the allowability addressing to claim 1, Farhang-Boroujeny '626 also fails to disclose, teach or suggest a step of the present method,

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as set forth in claim 9, that is "applying an N (N is a positive integer) times divide frequency sampling operation onto an **input data list of the near-end crosstalk canceller**" (Emphasis added). As such, the present invention, as set forth in claim 9 is submitted to be novel and unobvious over Farhang-Boroujeny '626, or any of the other cited references, taken alone or in combination, and thus should be allowed. MPEP §2131

If independent claim 1 is allowable over the prior art of record, then its dependent claims 2-8 are allowable as a matter of law, because these dependent claims contain all features of their respective independent claim 1. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

If independent claim 9 is allowable over the prior art of record, then its dependent claims 10-16 are allowable as a matter of law, because these dependent claims contain all features of their respective independent claim 9. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

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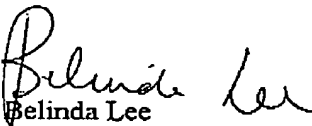
### CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-16 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

  
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